

### **AMENDMENTS TO THE CLAIMS**

**This listing of claims will replace all prior versions and listings of claims in the application:**

#### **LISTING OF CLAIMS:**

1. (currently amended): A friction force measurement apparatus which measures ~~measuring~~ friction force between a fixed member fixed on a main body of a magnetic tape drive and a magnetic tape abrading the fixed member, the apparatus comprising:

a vibration detector which is joined with said fixed member ~~and a vicinity of the fixed member~~ and detects a vibration in abrasion of said magnetic tape with said fixed member; and

a calculation device which calculates the friction force between said fixed member and said magnetic tape based on a signal from said vibration detector.

2. (original): A friction force measurement apparatus according to claim 1, wherein a vibration input unit in which vibration of said vibration detector is input is directly contacted with said fixed member.

3. (currently amended): A friction force measurement apparatus according to claim 1, wherein a low pass filter having a ~~of which~~ cutoff frequency of ~~is~~ not less than 50 kHz is disposed ~~equipped~~ between said vibration detector and said calculation device.

4. (currently amended): A friction force measurement apparatus according to claim 2, wherein a low pass filter having a ~~of which~~ cutoff frequency of ~~is~~ not less than 50 kHz is ~~disposed~~ equipped between said vibration detector and said calculation device.

5. (currently amended): A friction force measurement apparatus according to claim 1, wherein a recording device records ~~ing~~ the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device. ~~with time is equipped.~~

6. (currently amended): A friction force measurement apparatus according to claim 2, wherein a recording device records ~~ing~~ the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device. ~~with time is equipped.~~

7. (currently amended): A friction force measurement apparatus according to claim 3, wherein a recording device records ~~ing~~ the friction force calculated by said calculation device and records a time associated with the friction force calculated by said calculation device. ~~with time is equipped.~~

8. (original): A friction force measurement apparatus according to claim 1, wherein said fixed member is a magnetic head.

9. (original): A friction force measurement apparatus according to claim 2, wherein said fixed member is a magnetic head.

10. (original): A friction force measurement apparatus according to claim 3, wherein said fixed member is a magnetic head.

11. (original): A friction force measurement apparatus according to claim 1, wherein said vibration detector is an acoustic emission sensor.

12. (original): A friction force measurement apparatus according to claim 2, wherein said vibration detector is an acoustic emission sensor.

13. (original): A friction force measurement apparatus according to claim 3, wherein said vibration detector is an acoustic emission sensor.

14. (canceled).

15. (original): A friction force measurement apparatus according to claim 1, wherein said fixed member is a guide portion regulating a width direction of a magnetic tape.

16. (original): A friction force measurement apparatus according to claim 2, wherein said fixed member is a guide portion regulating a width direction of a magnetic tape.

17. (original): A friction force measurement apparatus according to claim 3, wherein said fixed member is a guide portion regulating a width direction of a magnetic tape.

18. (original): A friction force measurement apparatus according to claim 1, wherein said vibration detector is pressed into a head of a screw.

19. (original): A friction force measurement apparatus according to claim 2, wherein said vibration detector is pressed into a head of a screw.

20. (original): A friction force measurement apparatus according to claim 3, wherein said vibration detector is pressed into a head of a screw.